

AMENDMENTS TO THE CLAIMS

Listing of the Claims

The following listing of claims replaces all previous listings or versions thereof:

- 1-15. (Canceled)
16. (New) A method for detection of endotoxin comprising the steps of:
 - a) contacting a sample containing endotoxins with a surface, subsequently
 - b) incubating of bacteriophage tail proteins with the endotoxin immobilised on the surface, and
 - c) detecting bacteriophage tail proteins by means of spectroscopic methods, ELISA, chemical or enzymatic detection reaction of endotoxins or cleaved-of endotoxin components, or by means of capacitance measurements.
17. (New) The method according to claim 16, further comprising after step b) and before step c) an additional step of separating said bound bacteriophage tail proteins from endotoxin.
18. (New) The method according to claim 16, wherein the surface is coated with bacteriophage tail proteins.
19. (New) The method according to claim 16, wherein the bacteriophage tail protein is a protein of the short bacteriophage tail fiber or a coat protein of bacteriophages without tail.
20. (New) The method according to claim 16, wherein the protein of the short bacteriophage tail fiber is selected from K3, T2, T4, Ox2, RB32-33, AR1, PP01 and RB69.
21. (New) The method according to claim 19, wherein the bacteriophage tail protein has a homology of at least 60 % to T4p12 protein on the amino acid level.

22. (New) The method according to claim 16, wherein the bacteriophage tail proteins are modified.
23. (New) The method according to claim 16, wherein the bacteriophage tail proteins are covalently linked to enzymatically active proteins.
24. (New) The method according to claim 16, wherein the bacteriophage tail protein comprises a strep-tag or a his-tag.
25. (New) The method according to claim 24, wherein the tag comprises an amino acid sequence according to SEQ ID NOS 5, 6 or 7.
26. (New) The method according to claim 24, wherein the p12-protein of phage T4, K3, T2, Ox2, RB32-33, AR1, PP01 or RB69 is used as bacteriophage tail protein.
27. (New) The method according to claim 16, wherein the Ca^{2+} concentration is in the incubation 0.1 μM to 10 mM and/or the Mg^{2+} concentration is 0.1 μM to 10 mM.
28. (New) The method according to claim 16, wherein marked endotoxin is displaced from the binding with a bacteriophage tail protein and wherein the marked endotoxin is detected subsequently.
29. (New) An endotoxin detection kit comprising a carrier coated with an endotoxin binding substance, a container containing a reference endotoxin for measurement of a standard curve, and a container with at least one bacteriophage tail protein or an anti lipid A antibody.